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ABSTRACT

In spring 1980, a study was conducted to determine the present level of course activity in community colleges in the areas of science and society, technology and society, environmental studies, the history of science and/or technology, or other science, technology, and society (STS) fields. In addition, the study sought to encourage contact between those individuals and institutions involved in STS fields. Survey instruments were sent to 820 publicly supported 2-year colleges. Responses were received from 156 colleges, with 39 schools providing STS course data. Study findings included the following: (1) in the 39 colleges that provided course data, 52 STS courses were offered; (2) median enrollment in the 45 courses for which enrollment figures were available was just above 25 students; (3) the frequency of STS course offerings rarely exceeded three sections per year and over half of the courses were offered only once a year; (4) 31 of the 44 courses for which status information was provided were electives, 10 were general education courses, and 3 were general education electives; and (5) texts and audio-visual materials varied widely for the courses, with 33 courses using audio-visual media. The bulk of the report provides information on STS courses at individual colleges in 17 states. When available, information is provided on texts and materials used, frequency of course offerings, average enrollments, origin of students in terms of major, course instructors, and course status. (HB)

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SCIENCE, TECHNOLOGY, AND SOCIETY

IN

COMMUNITY COLLEGES

Directory of Course Offerings in the U.S.

Compiled and Edited by

James Williams
Technology Studies and Education Committee
Society for the History of Technology
Social Science Division
Gavilan College
Gilroy, California

July, 1981

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PREFACE

In 1975 Cornell University's Program on Science, Technology and Society published a directory of academic programs and activities in "science, technology and society" studies (STS).* Revealed were some 2000 course offerings by nearly 400 institutions, literature lists, faculty research interests, lists of research institutes and agencies, over 100 STS program profiles, and a guide for resources. The editors concluded that "teaching and research on the interaction of science and technology with society have been growing rapidly in higher education in recent years." The Cornell study, however, largely reflected program and course activities at four year colleges and universities, listing only 29 community colleges and two year branch campuses of larger institutions. The Technology Studies and Education Committee of the Society for the History of Technology (SHOT) agreed at its 1980 annual meeting that too little was known about STS teaching efforts in community colleges and consequently encouraged this survey.

The objectives of this report are to suggest the present level of STS course activity in community colleges around the nation and encourage contact between those institutions and individuals at the community college level who are involved in the field. No attempt has been made to up-date resource listings or literature lists which are available in the Cornell study. Persons interested in continuing curriculum information related to STS are encouraged to contact the STS Program, 327 Maginnes Hall #9, Lehigh University, Bethlehem, PA, 18015, and subscribe to their curriculum newsletter, Science, Technology & Society.

The SHOT Technology Studies and Education Committee welcomes comments concerning this survey. We would be particularly interested in receiving data about courses and programs not included herein as well as know if this is a useful resource tool. Please address correspondence to James Williams, Social Science Division, Gavilan College, 5055 Santa Teresa Boulevard, Gilroy, CA, 95020.

Thanks are extended to Dr. Stephen H. Cutcliffe of the Lehigh STS Program for his support and encouragement, to student assistant Frances Wood, who prepared the survey for distribution, and to the Social Science Division of Gavilan College which supported the preparation and publication of the survey.

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*Science, Technology, and Society: A Guide to the Field (December, 1976). Write Program on Science, Technology, and Society, Cornell University, 628 Clark Hall, Ithaca, NY, 14853.

SUMMARY

During the Spring, 1980, a total of 820 survey forms were mailed to public supported community, technical, and other two year colleges. 156 responses were received for a 19 percent return, and 39 colleges or 25 percent of those responding provided STS course data. Sixteen of the total number sending returns were among the 29 which appeared in the 1975 Cornell study. Not included in this survey were independent or private two year colleges.

California led in responses with 25 out of the state's 106 community colleges providing returns, and thirteen or 52 percent of those respondents provided course data. Texas gave the next largest response, fourteen of the state's 57 community colleges sending returns, but none of the Texas colleges indicated STS offerings. Nine of some 40 colleges in New York responded, four of them providing course data; and nine of sixteen Massachusetts colleges responded, three of them indicating course offerings. Three out of nine Michigan colleges, two of four Connecticut colleges, two of six Georgia colleges, two of six Oregon colleges, and two of five Washington colleges responding reported courses.

The 39 colleges responding positively to the survey reported a total of 52 STS related courses. Among them, 35 courses dealt with science and society, technology and society, environmental studies, or the history of science and/or technology. At least four more could be termed courses in future studies, and another four related to science and philosophy. Three more offerings were based on James Burke's "Connections" television series, and the remainder dealt with crafts, the engineering profession, computers, energy and society, and physics and society.

Text and audio-visual materials varied widely for the courses reported. Bronowski's Ascent of Man and Burke and Eakin's Technology and Values were used for three courses each, and no other texts were used in more than two courses. Seven courses used instructor developed materials in lieu of a text, and six more appeared to have used no text materials.

Audio-visual materials were reported in use in 33 courses. Films appeared as the most widely used media, listed for 22 courses. The "Ascent of Man" and "Connections" series were the most popular, the former used in five courses, the latter in four. Video materials were used in seven courses and slides in nine. Transparencies were indicated for one course, and three other courses noted the use of a planetarium, a computer, and role playing techniques.

The popularity and status of STS courses in community

colleges is suggested by enrollments, frequency of course offerings, and whether courses fill elective or general education requirements on campuses. Average per section enrollment figures were given for 45 courses, and the median enrollment for these sections was just slightly above 25 students. Only eight courses indicated enrollments over 35, whereas nine courses showed them below 20 students.

Frequency of course offerings rarely exceeded three sections per year, only five courses going beyond that number. In fact, 52 percent or 25 of the 48 courses indicating frequency data were offered only once each year. Seven courses or 14.5 percent were offered twice each year, and a like number were offered three times per year. Four courses were offered less than once per year.

The status of courses was reported for 44 offerings. Of these, 31 or 70 percent were indicated to be electives, ten were identified as general education courses, and three as general education electives. Courses identified as having some sort of general education status were among the highest in enrollments, 66 percent of them having more than 25 students per section, and 54 percent of these courses were offered more than once each year. Conversely, elective courses had lower enrollments, 64 percent having fewer than 30 students per section, and 66 percent of these courses were offered only once each year.

STS courses seem to have just gained a toe hold in community colleges. While it is gratifying to see that a wide variety of courses are being taught, it is unfortunate that only one quarter of the country's community colleges presently appear to have STS courses. It is even more sobering that over 70 percent of those courses have only elective status in colleges which concentrate on general education and technical and career programs.

While the STS concept may be making gains in four year colleges and universities, it would appear that the study of the interaction of science and technology with society is considered peripheral in community colleges. At best STS topics may be found in existing general education courses such as history, sociology, and physical science. Yet, only nine respondents to this survey noted that dimensions of STS were addressed at their institutions in this fashion. Other survey comments suggest little sincere support of STS by community colleges. While six survey respondents indicated their institutions were either interested in or working on STS related courses, seven more pointed out they had dropped or were no longer actively offering such courses because of declining enrollments or budget constraints.* Still another seven colleges which had offered

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*Among these are courses listed herein for Santa Barbara City College (CA), Dawson Community College (MT), and Niagra County Community College (NY).

STS courses, according to the 1975 Cornell study, reported they too had dropped them.

Nevertheless, STS is a far reaching concept, as the Cornell study suggested, and because of the ambiguity of STS studies this survey may not accurately reflect all activities in STS at community colleges. As an example, Cabrillo College in California offers extensive programs in horticulture and solar technology, both of which concentrate on what has been termed "appropriate technology." According to the program director, Richard Merrill, the interaction of science and technology with society and the environment is continually stressed in both these programs. Similar programs focusing on solar energy are at Modesto Junior College, also in California, and at Lane Community College in Oregon, and a vast array of technical programs abound in community colleges across the nation. Many of these may indeed incorporate dimensions of STS.

Because of the career and technical orientation of so many community colleges, all too many educators refer to them simply as "vocational schools." However, the strength of STS in the community colleges and in higher education itself may finally be found in an integration of the possibilities for education in appropriate technology at community colleges with those more academic programs and courses generally included in STS studies. One might imagine a community college course entitled "Humanities, Technology and Society" which combined classroom study in STS and critical thinking with an array of technology laboratories focusing on such fields as horticulture, energy, construction, electronics, and drafting. As a required general education offering, such a course could do much toward bridging the so-called two cultures gap for tens of thousands of college students. But such visions are far in the future if this survey is any reflection of the reality of STS in community colleges.

COURSE OFFERINGS

ARKANSAS

Garland County Community College
1 College Drive
Hot Springs, AR 71901

Lloyd Beam, Chairman
Math and Science Division
501/767-9371 X 47

Course: Physics and Society. Relates physics and astronomy to various aspects of society; considers in detail the Quark theory and verification by use of accelerators.

Instructor: Dr. Paul Thomas

Texts: instructor notes

Frequency offered: 1 sect/3 to 4 years

Average enrollment: 10

Student majors: 50% sci/engr; 50% soc sci/hum

Course status: elective

CALIFORNIA

Cabrillo College
6500 Soquel Drive
Aptos, CA 95003

Richard T. Hart, Chairman
Engineering
408/425-6328

Course: Engr 5, Engineering and Society. The role and function of engineering and technology in modern society and problems and responsibilities of the engineering profession. An introduction to the methods of engineering analysis and problem solution; case studies of contemporary issues which emphasize the interface of the engineer with society.

Instructor: Richard T. Hart

Texts: Beakley, <u>An Introduction to Engineering: A Creative Profession</u>

Frequency offered: 1 sect/year

Average enrollment: 20

Student majors: 80% sci/engr; 10% soc sci/hum; 10% career/voc

Course status: elective

College of San Mateo
1700 West Hillsdale Boulevard
San Mateo, CA 94301

Gregory Davis
Social Science Department
415/574-6376

Course #1: Hum 125, Technology, Contemporary Society and Human Values. A humanistic and critical analysis of the impact of contemporary technology on the environment, economic and political systems, warfare, education, philosophy, behavior control, and human relations. Reasons for the rise of technological civilization in the West, the phenomenology of modern technology, and the problem of control are examined.

Instructor: Gregory Davis

Texts: Schumacher, Small is Beautiful; Ellul, The Technological Society; Davis, Humanism or Nihilism; Commoner, The Closing Circle

AV materials: films including "Future Shock," "The Other Way," "Lovejoy's Nuclear War," and "Nuts and Bolts"

Frequency offered: 4 sect/year

Average enrollment: 45

Student majors: 30% sci/engr; 40% soc sci/hum; 30% career/voc

Course status: general education elective

Course #2: Hum 113, Man and Nature: The Impact of the New Science, 17th to 19th Centuries. The development of modern science and the impact of the New Science on life and culture in the 17th through 19th centuries are examined from a humanistic perspective. Specific topics include new conceptions of human destiny; the new scientific method and "reality"; the social and ecological effects of industrialization; the impact of technologically advanced Europe on the rest of the world; literary, artistic, philosophical, and political reactions to the new scientific culture; and the limitations of the scientific values and world view.

Instructors: Gregory Davis and Mike Chriss

Texts: Dostoevsky, Notes from the Underground; Rousseau, Discoveries; Fromm, Marx's Concept of Man; Bernal, Science in History, II; Mason, History of the Sciences; and Discoveries and Opinions of Galileo

AV materials: instructor slides and planetarium

Frequency offered: 1 sect/year

Average enrollment: 45

Student majors: 25% sci/engr; 50% soc sci/hum; 25% career/voc

Course status: general education elective

Columbia College
Box 1849
Columbia, CA 95310

Dr. John C. Menzie
209/532-3141 X251

Course: Phil/Phys 108, Humanistic and Scientific Thought. A study of the relationships between the sciences and the humanities and of the major problems in the philosophy of science.

Instructors: Matild Kamber and Robert McDonald

Texts: Barnett, The Universe and Dr. Einstein; Stumpf, Socrates to Sartre

AV materials: slides and films

Frequency offered: 1 sect/year

Average enrollment: 20

Student majors: 5% sci/engr; 80% soc sci/hum; 5% career/voc; 10% other

Course status: elective

Cypress College
9200 Valley View Boulevard
Cypress, CA 90630

Social Science Chairperson
714/826-2220

Course #1: Hist/Sci 105, History of Physical Science.

Instructor: Devon Showley

Frequency offered: 5 sect/year

Average enrollment: 35

Course status: elective

Course #2: Art/Hist 126, History of Antiques and Collectibles.

Instructor: Tom Reeve

Texts: Kovell, Know Your Antiques

AV materials: instructor slides

Frequency offered: 2 sect/year

Average enrollment: 30

Student majors: 30% soc sci/hum; 30% art; 40% other

Fresno City College
1101 East University Avenue
Fresno, CA 93741

Gerry Stokle, Associate Dean
Social Sciences
209/442-8210

Course: Soc 45, Futuristics.

Instructor: James Walsh

Texts: Orwell, 1984; Brower, The Starship and the Canoe

AV materials: films such as "Future Shock"

Frequency offered: 1 sect/year

Average enrollment: 30

Student majors: 15% sci/engr; 55% soc sci/hum; 30% career/voc; 10% other

Gavilan College
5055 Santa Teresa Boulevard
Gilroy, CA 95020

James Williams, Associate Professor
Social Science Division
408/847-1400 X357

Course: Hist 12, Civilizing the Machine: History of American Technology. An investigation into the use and abuse of the machine in American history, emphasizing the interrelationship of values and technology in society. Student research into local technology and material culture is an integral part of this course.

Instructor: James Williams

Texts: Layton, Technology and Social Change in America; Morison, From Know-How to Nowhere: The Development of American Technology; Sloane, A Reverence for Wood; Twain, Connecticut Yankee in King Arthur's Court; and selected articles.

AV materials: instructor slides and films including "Day After Day," "Pioneer Mill," "Gunsmith at Williamsburg," "Nuts and Bolts," "Have I Told You Lately That I Love You," "Motion Study Principles," and "Modern Times."

Frequency offered: 1 sect/year

Average enrollment: 15

Student majors: 25% sci/engr; 75% soc sci/hum

Course status: elective

Palomar Community College
1140 West Mission Road
San Marcos, CA 92069

Brenda Brubaker
Curriculum Secretary
714/744-1150 X222

Course: Bio/Geol 5, Man, Science and Environment. An interdisciplinary course designed for liberal arts students interested in integrating the principles of ecology with the social and environmental problems of man. Studies the reciprocal impacts of man and his biological and physiochemical environments including definition of problems such as species endangerment, environmental degradation, and population impacts. Also, consideration of how science and technology can be utilized toward enlightened use of neutral resources is considered.

Instructors: Dr. Nancy Jessop and David Totten

Texts: Wagner, Environment and Man; McKenzie, Man and His Physical Environment

AV materials: slides and films

Frequency offered: 2 sect/year

Average enrollment: 70

Student majors: 15% sci/engr; 85% soc sci/hum

Course status: general education

Pasadena City College
1570 East Colorado Boulevard
Pasadena, CA 91106

Kennon G. Miedema, Professor
History
213/578-7442

Course: History of Technology and Craftsmanship in America. A discussion of building technology and its impact upon architecture and decorative crafts at the turn of the century, with special emphasis upon the American arts and crafts movement, 1876-1916.

Instructor: Kennon G. Miedema

Average enrollment: 100

Student majors: 75% soc sci/hum; 25% other

Rio Hondo College
3600 Workman Mill Road
Whittier, CA 90608

Don L. Jenkins, Vice President
Academic Affairs
213/692-0921

Course: Humanities and Science--The Ascent of Man. An interdisciplinary course based upon Jacob Bronowski's film series.

Instructors: Bruce Burkhart and Hildegard Platzer

Texts: Bronowski, The Ascent of Man

AV materials: "Ascent of Man" film series

Frequency offered: 1 sect/year

Average enrollment: 60

Student majors: 10% sci/engr; 50% soc sci/hum; 20% career/voc; 20% other

Course status: general education elective

Santa Barbara City College
721 Cliff Drive
Santa Barbara, CA 93109

Dr. Robert A Carman
805/965-0581

Note: The courses listed at Santa Barbara are "on the books" but have not been offered since 1979 because of low enrollments and decreasing finances.

Course #1: Phys Sci 5-6, Science and Society.

Instructor: Dr. Robert A Carman

Texts: Teich, Technology and Man's Future; supplementary readings

AV materials: slides and films

Frequency offered: 2 sect/year

Average enrollment: 20

Student majors: 30% sci/engr; 70% soc sci/hum

Course status: general education

Course #2: History of Technology.

Instructor: Dr. Robert A. Carman

Texts: Kranzberg and Pursell, Technology in Western Civilization, I; supplementary readings

AV materials: slides and films

Frequency offered: 1 sect/year

Average enrollment: 20

Student majors: 20% sci/engr; 80% soc sci/hum

Course status: general education

Sierra College
5000 Rocklin Road
Rocklin, CA 95677

Bill M. Tsuji
916/624-333 X260

Course #1: Interdisciplinary I, Environment and the Human Impact. Designed to provide students with a theoretical and practical understanding of ecological principles and the complexities of contemporary environmental problems on both a local and global level. Discussion of short- and long-range actions which may be taken by the individual citizen.

Instructor: Richard Alman (coordinator)

AV materials: films plus guest speakers

Frequency offered: 2 sect/year

Average enrollment: 90

Course status: general education

Course #2: Interdisciplinary II.

Instructor: Roland Bergtold

AV materials: films

Frequency offered: 1 sect/year

Course #3: Interdisciplinary III, Time Sharing Computer in the Classroom. An introductory course using the time-sharing computer as a classroom tool. Participants will familiarize themselves with the flexibility of terminal operation and programming using BASIC Special applications are examined in the areas of business, chemistry, physics, biology, mathematics, and social sciences.

Texts: Edwards and Broadwell, Flowcharting and BASIC
Frequency offered: 1 sect/year
Course status: elective

West Los Angeles College
4800 Freshman Drive
Culver City, CA 90230

James R. Shaver, Professor
Sociology
213/836-7110 X453

Course: Soc 9, Sociology of the Future. Alternative futures for the world of fifty years from now. Topics covered include population, bio-ethics, behavior control, government, power structure, economics, and environment.
Instructor: Patricia Comstock
Texts: works by Toffler and Daniel Bell
Frequency offered: 1 sect/2 to 3 years
Course status: elective

COLORADO

Pikes Peak Community College
5675 South Academy Boulevard
Colorado Springs, CO 80906

Lloyd Evans
303/576-7711 X364

Course: Connections: Technology and Change. Based upon the television series by James Burke.
Instructor: Robert C. Leonard
Texts: Burke and Eakin, Technology and Change
AV materials: "Connections" series on video-cassette
Frequency offered: 1st offering, Fall, 1981
Average enrollment: anticipate 35
Course status: general education

CONNECTICUT

Housatonic Community College
510 Barnum Avenue
Bridgeport, CT 06608

Mario A. Vecchiarelli, Professor
203/579-6444

Course: Science and Society. Presents concepts and problems relating to the impact of science on modern society as well as

the influence of the social and political environment upon science and the practicing scientist.

Instructors: Mario A. Vecchiarelli and Leonard W. Fine

Texts: Watson, The Double Helix; Miller, A Canticle for Leibowitz; Thomas, Lives of a Cell; and Scientifc American's Science, Conflict and Society

AV materials: "Ascent of Man" film series

Frequency offered: 2 sect/year

Average enrollment: 30

Student majors: 40% sci/engr; 60% soc sci/hum

Course status: elective

Quinebaug Valley Community College
24 School Street
Danielson, CT 06239

John Kuchle
203/774-1130

Course: Colloquium in Modern Science. A human ecology course covering topics in science, technology and society.

Instructor: John Kuchle

Texts: Stevenson, Seven Theories of Human Nature; Miller, Living in the Environment; Connecticut Humanites Council, Science, Technology, and Ethics

FLORIDA

Central Florida Community College
P.O. Box 1388
Ocala, FL 32678

Ira Holmes, Chairman
Social Sciences
904/237-2111

Course: Soc 1270, Connections: Technology and Change. Based upon the television series by James Burke.

Instructor: Joe Fleming

Texts: Burke and Eakin, Technology and Change

AV materials: "Connections" series

Frequency offered: 1 sect/year

Average enrollment: 20

Student majors: 20% sci/engr; 50% soc sci/hum; 20% career/voc; 10% other

Course status: elective

Santa Fe Community College
3000 Northwest 83d Street
Gainesville, FL 32601

Heijia L. Wheeler, Dean
Sciences
904/377-5161 X417

Course: APB 1130, Energy and Ecology. A basic biology-ecology course emphasizing common energy systems and patterns of order and disorder in living things and the environment.

Instructor: Elisabeth C. Odum

Texts: Odum and Odum, Energy Basis for Man and Nature

AV materials: microcomputers for systems modeling

Frequency offered: 3 sect/year

Average enrollment: 35

Student majors: 15% sci/engr; 35% soc sci/hum; 50% other

Course status: elective

GEORGIA

Macon Junior College
Macon, GA 31297

Alfred G. Diboll
912/474-2700

Course: Sci 150, Science, Technology and the Citizen. The effects of science and technology on the human condition, the interaction of scientists with constituted authority, and the ethics of science behavior.

Instructor: Dr. David F. Dever

Texts: Langford, Galileo, Science and the Church; Kuhn, The Structure of Scientific Revolutions

AV materials: films

Frequency offered: 1 to 2 sect/year

Average enrollment: 25

Student majors: 100% soc sci/hum

Course status: elective

HAWAII

Hawaii Community College
1175 Manono Street
Hilo, HI 96720

Jane Iida
808/961-9422

Course #1: Sci 20, Individual and Environment. The nature

of man and of the problems which science and technology have created; over-population and pollution and possible alternative solutions.

Instructor: Judith Mortemore

Texts: Emmel, An Introduction to Ecology and Population Biology

AV materials: films and video tapes

Frequency offered: 3 sect/year

Average enrollment: 25

Student majors: 95% career/voc; 5% other

Course status: elective

Course #2: Sci 124, Technology, Ecology and Man. The nature of man and science and the rapid changes brought about by science and technology; the trends of society, environmental problems, alternative designs for life in a changing society.

Instructor: Judith Mortemore

Texts: Emmel, An Introduction to Ecology and Population Biology

AV materials: films and video tapes

Frequency offered: 4 sect/year

Average enrollment: 30

Student majors: 25% career/voc; 75% other

Course status: elective

Course #3: Soc Sci 24, Technology and American Society. The effects of man's cultural and social development on the growth of modern technology; the effect this technological development will have on future society.

Instructor: Richard Mortemore

Texts: none used

Frequency offered: 3 sect/year

Average enrollment: 25

Student majors: 90% career/voc; 10% other

Course status: elective

Course #4: Soc Sci 111, Man, Society and Technology. Man's existence in a changing society brought about by rapid technological advancements. Trends, current issues and future global alternatives for man's survival.

Instructor: Richard Mortemore

Texts: none used

Frequency offered: 4 sect/year

Average enrollment: 30

Student majors: 25% career/voc; 75% other

Course status: elective

LOUISIANA

Louisiana State University at Eunice
P.O. Box 1129
Eunice, LA 70535

Stephen Rowe, Assistant Professor
318/457-7311

Course #1: Hist 2101, History of Science and Technology from Antiquity to 1600. Scientific thought from the ancient Greeks to the Renaissance with origins of the scientific revolution, science in the Age of Galileo, connections between history of science and histories of technology, magic, astrology, philosophy and religion.

Instructors: Dr. James Ware, Dr. Gary Huey, and Dr. Stephen Rowe

Texts: Taylor, A Short History of Science and Scientific Thought; other specific paperbacks from the Norton press

AV materials: slide series produced by the history department of LSU-Baton Rouge

Frequency offered: 1 sect/year

Average enrollment: 15 to 20

Student majors: 30% sci/engr; 20% soc sci/hum; 50% career/voc

Course status: elective

Course #2: Hist 2102, History of Science and Technology from 1600 to the Present. History of the physical sciences, biology and medicine from the 17th century to the present; the impact of Newtonian and Darwinian thought on 18th and 19th century culture; science and scientific institutions since the 17th century; recent trends in high-energy physics, molecular biology and artificial intelligence.

Instructors: Dr. James Ware, Dr. Gary Huey, and Dr. Stephen Rowe

Texts: Taylor, A Short History of Science and Scientific Thought; other specific paperbacks from the Norton press

AV materials: slide series produced by the history department of LSU-Baton Rouge

Frequency offered: 1 sect/year

Average enrollment: 15 to 20

Student majors: 50% sci/engr; 20% soc sci/hum; 30% career/voc

Course status: elective

MASSACHUSETTS

Bristol Community College
777 Elsbree Street
Fall River, MA 02720

James William Pelletier, Professor
Chemistry and Science
617/678-2811

Course: Sci 17, History and Philosophy of Science. A survey of the philosophical, political, economic and social underpinnings of science since ancient times. The major focus of the course is on the period since the 16th century and on the conceptual framework within which scientists in each age have had to work.

Instructor: Dr. James William Pelletier

Texts: Brecht, Galileo

AV materials: film, "Galileo--The Challenge of Reason"; role playing by students

Frequency offered: 3 to 4 sect/year

Average enrollment: 30

Student majors: 100% career/voc

Course status: elective

Middlesex Community College
Springs Road
Bedford, MA 01730

Julien M. Farland
617/275-8910 X266

Course: Modern Technology and Human Values. An introductory study of the chief characteristics of modern technology. Issues examined include the relationship between modern science and technology, the impact of technology on moral choices, political activity and the physical environment.

Instructor: Julien M. Farland

Texts: Dorf, Technology, Society and Man; Fromm, The Revolution of Hope; various articles

Frequency offered: 1 sect/year

Average enrollment: 35

Course status: elective

Northern Essex Community College
Elliot Street
Haverhill, MA 01830

Course #1: Energy, Environment and Our Future.

Instructors: J. Osborne, P. Laszlo, and A. Pollock

Texts: Miller, Living in the Environment
AV materials: films from the NOVA series
Frequency offered: 3 to 4 sect/year
Average enrollment: 20 to 40
Course status: general education

Course #2: History of Science and Technology.
Instructors: J. Osborne and J. Guarino
Texts: Mason, History of the Sciences; Derry and Williams Short History of Technology from the Earliest Times to A.D. 1900
AV materials: "Ascent of Man" and "Connections" film series
Frequency offered: 1 sect/year
Average enrollment: 20
Course status: general education

MICHIGAN

Alpena Community College
666 Johnson Street
Alpena, MI 49707

Dr. M. Lee, Dean
Liberal Arts
313/356-9021 X253

Course: Science and Society.
Instructor: Richard Chute
AV materials: selected PBS television programs
Frequency offered: 1 sect/year
Average enrollment: 18
Student majors: 5% sci/engr; 95% soc sci/hum
Course status: elective

McComb County Community College
14500 Twelve Mile Road
Warren, MI 48093

Thomas A. Arbaugh, Professor
History
313/445-7293 or 445-7194

Course: The History of Invention and Technology in America. A survey of the history of invention and technology in America since colonial times. This course covers the causes of technological change and how those changes have affected society, and it considers how society influenced directions new technologies took. Concentration is focused on three

broad technologies: iron and steel; automobile and assembly line; and telegraph, telephone, radio, television and modern electronics.

Instructor: Thomas A. Arbaugh

Texts: Lewis, Iron and Steel in America; Hounshell, Telegraphy, Radio, and Television; Morison, From Know-how to Nowhere: The Development of American Technology; Flink, The Car Culture; Sloane, A Reverence for Wood; Layton, Technology and Social Change in America; Frankel, Steam Engines and Turbines

AV materials: films including "The American Challenge: Material and Social Progress from 1870-1917," "The Golden Spike: Building the Transcontinental Railroad," "The Automobile: Social and Economic Impact," "The Power Energy Crisis: Technological Challenge of the Future," and "Our Computer Society"

Frequency offered: 2 sect/year

Average enrollment: 20

Student majors: 25% soc sci/hum; 50% career/voc; 25% other

Course status: elective

MONTANA

Dawson Community College
Box 421
Glendive, MT 59330

Vern Lindquist, Assistant Professor
406/365-3396

Note: The following course has not been offered for several terms because of decreased student demand.

Course: Population, Energy and Environment. Environmental problems and threats and the philosophies promoting technology and resource depletion. The interrelationship of science, technology, economics, politics, education, environment and lifestyle.

Instructor: Vern Lindquist

Texts: Ehrlich, Population, Resources and Environment

Frequency offered: 1 sect/year

Average enrollment: 12

Student majors: 10% sci/engr; 70% soc sci/hum; 20% other

Course status: elective

NEW YORK

Fulton Montgomery Community College
Route 67
Johnstown, NY 12095

Varghese D. Pynadath, Associate Professor
518/762-4651

Course: Science, Technology, Society. A course on the nature of science and technology and the interaction between science, technology, and society. Cosmological theories and structure of matter theories, energy and communications technology, decision making process, and assessment of technology are subjects covered.

Instructor: Varghese D. Pynadath

Texts: instructor's materials

Frequency offered: 1 sect/year

Average enrollment: 25

Student majors: 40% sci/engr; 20% soc sci/hum; 40% career/voc

Course status: elective

Mohawk Valley Community College
1101 Sherman Drive
Utica, NY 13501

Douglas Bauer, Chairperson
Chemistry Department
315/792-5378 X378

Course: Science and Society. A general science course for nontechnical students and designed to provide perspective on the technical issues effecting the safety and welfare of the citizen. Topics to be covered include nuclear and other energy sources, electronics, natural resources, the food supply, toxicology, and consumer products. The perspective is that of appreciation of the issues and acquaintance with the literature.

Instructor: James Shaeffer

Text: not yet chosen as this is a new course

Frequency offered: 1 sect/year

Student majors: anticipate 100% soc sci/hum

Course status: general education

Niagra County Community College
3111 Saunders Settlement Road
Sanborn, NY 14132

J. J. Repetski, Chairman
Technology
716/731-3271 X139

Note: Student interest in the following course has been almost nonexistent since 1979.

Course: Man and Technology. An introduction of systematic engineering methodology for non-science oriented students. A humanistic approach is combined with decision making theory in the discussion of man's relationship with technical issues.

Instructors: Voisinet (technology) and Fennick (humanities)

Text: Marston, The Dynamic Environment

Frequency offered: 1 sect/year

Average enrollment: 20

Student majors: 1% sci/engr; 95% soc sci/hum; 4% other

Course status: elective

OREGON

Lane Community College
4000 East 30th Avenue
Eugene, OR 97405

George Alvergue
503/747-4501 X2433

Course: SSC 120/6320, Future of Energy. This is college transfer and vocational social science course which offers the student a broad overview of energy and its attendant problems. It is basically non-technical and is intent on analyzing energy problems in the world, in general, and in the United States and the Pacific Northwest in particular. After a brief presentation of the history of energy emphasizing growth in energy production and consumptive patterns, the balance of the course examines social, environmental, economic and political impacts of energy use and abuse. It satisfies a requirement for students in the college's energy management technician program and in the residential energy analyst program.

Instructor: George Alvergue

Text: Kranzberg, et al., Energy and the Way We Live

Course status: elective

Portland Community College
12000 SW 49th Avenue
Portland, OR 97219

Steve Rathman, Program Manager
Social Science Department
503/244-6111

Course: Phil 195, Critical Thinking: The Evaluation of Scientific Argument. This course is the third in a sequence. Its focus is evaluation of scientific and psuedo-scientific claims by the layman. Issues discussed have included the

Bermuda Triangle, sociobiology, and "scientific" creationism.

Instructors: Andrew Simon and Steve Carey

Text: Giere, Understanding Scientific Reasoning

Frequency offered: 8 sect/year

Average enrollment: 35

Course status: elective

PENNSYLVANIA

Pennsylvania State University, Allentown Campus
Fogelsville, PA 18051

Dr. John V. Cooney

Note: Allentown is a two year branch campus of the University. Its offerings are tied to those of the University, which has a Science, Technology and Society Program.

Course: Hum 101, Modern Science and Human Values. The relationships of science to the aspirations, values and arts of man.

Pennsylvania State University, Du Bois Campus
College Place
Du Bois, PA 15801

Robert N. Peck
814/371-2800

Note: Du Bois is a two year branch campus of the University. Its offerings are tied to those of the University, which has a Science, Technology and Society Program.

Course #1: STS 100, The Ascent of Man. Based on Bronowski's book and television series.

Instructor: Robert N. Peck

Texts: Bronowski, The Ascent of Man; Pestel and Mesarovich, Mankind at the Turning Point; Dubos, Reason Awake

AV materials: "Ascent of Man" film series

Frequency offered: 1 sect/year

Average enrollment: 5 to 12

Student majors: 80% sci/engr; 20% soc sci/hum

Course status: elective

Course #2: Hum 101, Science and Human Values. This course is not a part of the STS Program, but it is closely related.

Instructors: Robert N. Peck, Dale Evans, and Susan Delaney

Texts: Skinner, Walden Two; Isben, An Enemy of the People; DeBell, New Environmental Handbook; Watson, The Double

Helix; Goble, The Third Force
Frequency offered: 3 to 4 sect/year
Average enrollment: 5 to 20
Course status: general education

VIRGINIA

Germanna Community College
Box 339
Locust Grove, VA 22508

Richard L. Stein, Professor
Chemistry
703/399-1333 X291

Course: Ascent of Man. This course is designed to familiarize students with the historical development, social and industrial changes, and social impact of science.
Instructors: R. L. Stein, G. Coleman, and J. Tate
Text: Bronowski, The Ascent of Man
AV materials: "Ascent of Man" series on video tape
Frequency offered: 1 sect/year
Average enrollment: 15
Course status: elective

WASHINGTON

Green River Community College
12401 S.E. 320th Street
Auburn, WA 98002

John C. Hanscom, Instructor
History
206/833-9111 X379

Course: Technology and Change. A television course employing the "Connections" series. Offered for variable credit (1 to 5 units).
Instructor: John C. Hanscom
Text: Burke and Eaton, Technology and Change
AV materials: "Connections" television series
Frequency offered: 1 sect/year
Average enrollment: 15
Student majors: 10% sci/engr; 50% soc sci/hum; 25% career/voc; 15% other
Course status: elective

Skagit Valley College
2405 E. College Way
Mount Vernon, WA 98273

James L. Milne, Instructor
206/428-1186

Course #1: Technology through the Ages. A very brief look at the development of technology--ideas and artifacts--from the beginnings of time to the present.

Instructor: James L. Milne

Text: Klemm, History of Western Technology

Frequency offered: 2 sect/year

Average enrollment: less than 10

Student majors: 100% sci/engr

Course #2: Futuristics. Study of psychological and sociological changes in an age of rapid technological development.

Instructor: Jack Turley

Text: none used

AV materials: slides developed by the instructor

Frequency offered: 2 sect/year

Average enrollment: 35

Student majors: 75% soc sci/hum; 25% career/voc

Course status: general education

ADDENDUM

CALIFORNIA

Merced College
3600 M Street
Merced, CA 95340

Charles Ostrander
209/384-6293

Course #1: Anthro 30, Man: Cultures and Society. A survey course designed to provide the student with an understanding of the cultural, biological, and physical forces that have influenced historic and current development of man.

Instructor: Charles Ostrander

Texts: Hardi, Stalking the Wild Taboo; Klemm , History of Technology

AV materials: films such as "The Hunters," "Nanook of the North," "Deadbirds," "Early Stone Tools," "Search for Early Americans," and the Cosmos series

Frequency offered: 1 to 2 sect/year

Average enrollment: 40

Course status: elective

Course #2: Anthro 31, 2000 Years: The Future of Man and America. A survey course of possibilities, prognostications, and pure guesses about the future of man and America in the 21st and subsequent centuries.

Instructor: Charles Ostrander

Text: local materials

AV materials: series of pictures made by NASA for the Year 2000 series

Frequency offered: 1 sect/year

Average enrollment: 40

Course status: elective

NEW YORK

Tompkins-Cortland Community College
Dryden, NY 13053

Joe Dabes, Professor
Engineering Technology and Sciences
607/844-8211

Course: Technology and Environment. The effect of technology on the environment with an emphasis on technological solutions to problems. Topics covered include population, water pollution, air pollution, and energy.

Instructor: Joe Dabes

Text: Masters, Introduction to Environmental Science and Technology

AV materials: transparencies and some films

Frequency offered: 1 sect/year

Average enrollment: 30

Student majors: 25% sci/engr; 25% soc sci/hum; 25% career/voc; 25% other

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96 Powell Library Building
University of California
Los Angeles, California 90024

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